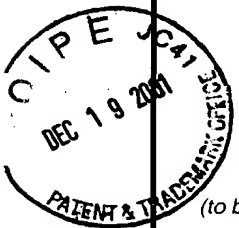


Please type a plus sign (+) inside this box → +

PTO/SB/21 (08-00)

Approval for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/930,871
Filing Date	August 15, 2001
First Named Inventor	Turner
Group Art Unit	1645
Examiner Name	Not Yet Assigned
Attorney Docket Number	LEX-0216-USA

Total Number of Pages in This Submission 8

RECEIVED
DEC 20 2001
TECH CENTER 1600/2000

ENCLOSURES (check all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> Fee Transmittal Form | <input type="checkbox"/> Assignment Papers (for an Application) | <input type="checkbox"/> After Allowance Communication to Group |
| <input type="checkbox"/> Fee Attached | <input type="checkbox"/> Drawing(s) | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences |
| <input type="checkbox"/> Amendment / Reply | <input type="checkbox"/> Licensing-related Papers | <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) |
| <input type="checkbox"/> After Final | <input type="checkbox"/> Petition | <input type="checkbox"/> Proprietary Information |
| <input type="checkbox"/> Affidavits/declaration(s) | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Status Letter |
| <input type="checkbox"/> Extension of Time Request | <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address | <input type="checkbox"/> Other Enclosure(s) (please identify below): |
| <input type="checkbox"/> Express Abandonment Request | <input type="checkbox"/> Terminal Disclaimer | - Return Postcard |
| <input checked="" type="checkbox"/> Information Disclosure Statement | <input type="checkbox"/> Request for Refund | - PTO1449 & 59 references cited |
| <input type="checkbox"/> Certified Copy of Priority Document(s) | <input type="checkbox"/> CD, Number of CD(s) _____ | |
| <input type="checkbox"/> Response to Missing Parts/Incomplete Application | Remarks | References Cited in (2) Binders |
| <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | | |

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Lexicon Genetics Incorporated
	Lance K. Ishimoto Reg. No. 41,866

Signature	Lance K. Ishimoto by David W. Hbler DAVID W. HBLER REG. NO. 41,071
-----------	--

Date	December 7, 2001
------	------------------

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date: December 7, 2001

Typed or printed name	Michelle Klein
-----------------------	----------------

Signature	Michelle Klein	Date	December 7, 2001
-----------	----------------	------	------------------

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

19 2001

Applicant(s): Turner *et al.*

Application No.: 09/930,871

Filed: August 15, 2001

Group Art Unit: 1645

Title: Novel Human Ion Channel Proteins and
Polynucleotides Encoding the Same

Examiner: Not Yet Assigned

Attorney Docket No.: LEX-0216-USA

Assistant Commissioner for Patents
Washington, D.C. 20231
Box DD

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:
- ☐ Certification under 37 CFR 1.97(e), or
 - ☐ a \$240.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:
- ☐ Certification under 37 CFR 1.97(e), and
 - ☐ a petition under 37 CFR 1.97(d)(2)(ii), and
 - ☐ a \$130.00 petition fee set forth in 37 CFR 1.17(i)(1).
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

☒ Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

RECEIVED
DEC 20 2001

TECH CENTER 1600/2900

Applicant submits that the above references taken in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement to Lexicon Genetics Deposit Account No. 50-0892. A copy of this sheet is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

12-7-01
Date

REG. NO. 41,071
DAVID W. HIBLER
Lance K. Ishimoto by David W. Hibler
Lance K. Ishimoto Reg. No. 41,866

LEXICON GENETICS INCORPORATED
4000 Research Forest Drive
The Woodlands, TX 77381
(281) 863-3333

Please type a plus sign (+) inside this box → □

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Applicant Number	09/930,871
Filing Date	August 15, 2001
First Named Inventor	Turner
Group Art Unit	1645
Examiner Name	Not Yet Assigned
Attorney Docket Number	LEX-0216-USA

RECEIVED
DEC 20 2001
TECH CENTER 1600/2900

OIP E
DEC 19 2001
PATENT & TRADEMARK OFFICE

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	AA	4,215,051	•	Schroeder et al	07/29/80	
	AB	4,376,110	•	David et al	03/08/83	
	AC	4,594,595	•	Struckman	06/10/86	
	AD	4,631,211	•	Houghten	12/23/86	
	AE	4,689,405	•	Frank et al	08/25/87	
	AF	4,713,326	•	Dattagupta et al	12/15/87	
	AG	4,873,191	•	Wagner et al	10/10/89	
	AH	4,946,778	•	Ladner et al	08/07/90	
	AI	5,252,743	•	Barrett et al	10/12/93	
	AJ	5,424,186	•	Fodor et al	06/13/95	
	AK	5,445,934	•	Fodor et al	08/29/95	
	AL	5,459,127	•	Felgner et al	10/17/95	
	AM	5,556,752	•	Lockhart et al	09/17/96	
	AN	5,700,637	•	Southern	12/23/97	
	AO	5,744,305	•	Fodor et al	04/28/98	
	AP	5,837,458	•	Minshull et al	11/17/98	
	AQ	5,869,336	•	Meyer et al.	02/09/99	
	AR	5,877,397	•	Lonberg et al	03/02/99	
	AS	5,948,767	•	Scheule et al.	09/07/99	
	AT	6,075,181	•	Kucherlapati et al	06/13/00	
	AU	6,110,490	•	Thierry	08/29/00	
	AV	6,150,584	•	Kucherlapati et al.	11/21/00	

Examiner
Signature

Date
Considered

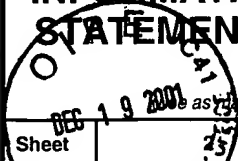
*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → □

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT 		Application Number	09/930,871
		Filing Date	August 15, 2001
		First Named Inventor	Turner
		Group Art Unit	1645
		Examiner Name	Not Yet Assigned
		Attorney Docket Number	LEX-0216-USA
Sheet	13	of	3

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number, publisher, city and/or country where published.
	AW	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426. ●
	AX	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544. ●
	AY	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14. ●
	AZ	Gautier et al, 1987, "α-DNA IV: α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physicochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641. ●
	BA	Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229. ●
	BB	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444. ●
	BC	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106. ●
	BD	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281. ●
	BE	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883. ●
	BF	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and RNase H", FEBS Letters 215(2):327-330. ●
	BG	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149. ●
	BH	Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110. ●
	BI	Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976. ●
	BJ	Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497. ●
	BK	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236. ●
	BL	Lavitrano et al, 1989, "Sperm Cells and Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723. ●
	BM	Lo, 1983, "Transformation by Iontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814. ●
	BN	Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659. ●
	BO	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster aprt Gene", Cell 22:817-823. ●
	BP	Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855. ●
	BQ	Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076. ●
	BR	Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608. ●
	BS	Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438. ●
	BT	O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531. ●

RECEIVED
TECH CENTER
 DEC 20 2001
 1600/2900

Please type a plus sign (+) inside this box → □

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/930,871
				Filing Date	August 15, 2001
				First Named Inventor	Turner
				Group Art Unit	1645
				Examiner Name	Not Yet Assigned
Sheet	3	of	3	Attorney Docket Number	LEX-0216-USA

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	BU	Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794. ●	
	BV	Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selectable markers in mouse L cells", Gene 30:147-156. ●	
	BW	Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451. ●	
	BX	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593. ●	
	BY	Stein et al, 1988, "Physicochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221. ●	
	BZ	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034. ●	
	CA	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454. ●	
	CB	Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321. ●	
	CC	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152. ●	
	CD	Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509. ●	
	CE	Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546. ●	
	CF	Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232. ●	
	CG	Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570. ●	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.